=> d his

(FILE 'HOME' ENTERED AT 10:22:41 ON 24 JUL 2000)

FILE 'MEDLINE, CAPLUS, BIOSIS, SCISEARCH' ENTERED AT 10:22:52 ON 24 JUL 2000

L1 5547 S BETA-CATENIN
L2 2091454 S DNA OR NUCLEIC(W)ACID OR POLYNUCLEOTIDE
L3 701 S L1 AND L2
L4 370097 S PHOSPHORYLAT?
L5 124 S L3 AND L4
L6 1345166 S 37 OR 45
L7 25 S L6 AND L5
L8 11 DUP REM L7 (14 DUPLICATES REMOVED)
L9 83 DUP REM L5 (41 DUPLICATES REMOVED)

=> d 1-11 au ti so l8

L8 ANSWER 1 OF 11 MEDLINE
AU Tejpar S; Nollet F; Li C; Wunder J S; Michils G; dal Cin P; Van Cutsem E; Bapat B; van Roy F; Cassiman J J; Alman B A
TI Predominance of **beta-catenin** mutations and **beta-catenin** dysregulation in sporadic aggressive fibromatosis (desmoid tumor).
SO ONCOGENE, (1999 Nov 11) 18 (47) 6615-20.
Journal code: ONC. ISSN: 0950-9232.

L8 ANSWER 2 OF 11 MEDLINE DUPLICATE 1
AU Mirabelli-Primdahl L; Gryfe R; Kim H; Millar A; Luceri C; Dale D; Holowaty E; Bapat B; Gallinger S; Redston M
TI **Beta-catenin** mutations are specific for colorectal carcinomas with microsatellite instability but occur in endometrial carcinomas irrespective of mutator pathway.
SO CANCER RESEARCH, (1999 Jul 15) 59 (14) 3346-51.
Journal code: CNF. ISSN: 0008-5472.

L8 ANSWER 3 OF 11 MEDLINE DUPLICATE 2
AU Garcia-Rostan G; Tallini G; Herrero A; D'Aquila T G; Carcangiu M L; Rimm D L
TI Frequent mutation and nuclear localization of **beta-catenin** in anaplastic thyroid carcinoma.
SO CANCER RESEARCH, (1999 Apr 15) 59 (8) 1811-5.
Journal code: CNF. ISSN: 0008-5472.

L8 ANSWER 4 OF 11 MEDLINE DUPLICATE 3
AU Yamada Y; Yoshimi N; Sugie S; Suzui M; Matsunaga K; Kawabata K; Hara A; Mori H
TI **Beta-catenin** (Ctnnb1) gene mutations in diethylnitrosamine (DEN)-induced liver tumors in male F344 rats.
SO JAPANESE JOURNAL OF CANCER RESEARCH, (1999 Aug) 90 (8) 824-8.
Journal code: HBA. ISSN: 0910-5050.

L8 ANSWER 5 OF 11 BIOSIS COPYRIGHT 2000 BIOSIS
AU Gamallo, Carlos (1); Palacios, Jose; Moreno, Gema; de Mora, Jorge Calvo;

Suarez, Asuncion; Armas, Alvaro
TI **beta-catenin** expression pattern in stage I and II ovarian carcinom[redacted] Relationship with **beta-catenin** gene mutations, clinicopathological features, and clinical outcome.
SO American Journal of Pathology, (Aug., 1999) Vol. 155, No. 2, pp. 527-536.
ISSN: 0002-9440.

L8 ANSWER 6 OF 11 MEDLINE DUPLICATE 4
AU Rimm D L; Caca K; Hu G; Harrison F B; Fearon E R
TI Frequent nuclear/cytoplasmic localization of **beta-catenin** without exon 3 mutations in malignant melanoma.
SO AMERICAN JOURNAL OF PATHOLOGY, (1999 Feb) 154 (2) 325-9.
Journal code: 3RS. ISSN: 0002-9440.

L8 ANSWER 7 OF 11 SCISEARCH COPYRIGHT 2000 ISI (R)
AU Chu B Y; Zhong R; Soncin F; Stevenson M A; Calderwood S K (Reprint)
TI Transcriptional activity of heat shock factor 1 at **37** degrees C is repressed through **phosphorylation** on two distinct serine residues by glycogen synthase kinase 3 alpha and protein kinases C alpha, and C zeta
SO JOURNAL OF BIOLOGICAL CHEMISTRY, (17 JUL 1998) Vol. 273, No. 29, pp. 18640-18646.
Publisher: AMER SOC BIOCHEMISTRY MOLECULAR BIOLOGY INC, 9650 ROCKVILLE PIKE, BETHESDA, MD 20814.
ISSN: 0021-9258.

L8 ANSWER 8 OF 11 MEDLINE
AU Fukuchi T; Sakamoto M; Tsuda H; Maruyama K; Nozawa S; Hirohashi S
TI **Beta-catenin** mutation in carcinoma of the uterine endometrium.
SO CANCER RESEARCH, (1998 Aug 15) 58 (16) 3526-8.
Journal code: CNF. ISSN: 0008-5472.

L8 ANSWER 9 OF 11 MEDLINE DUPLICATE 5
AU Miyoshi Y; Iwao K; Nagasawa Y; Aihara T; Sasaki Y; Imaoka S; Murata M; Shimano T; Nakamura Y
TI Activation of the **beta-catenin** gene in primary hepatocellular carcinomas by somatic alterations involving exon 3.
SO CANCER RESEARCH, (1998 Jun 15) 58 (12) 2524-7.
Journal code: CNF. ISSN: 0008-5472.

L8 ANSWER 10 OF 11 MEDLINE DUPLICATE 6
AU Palacios J; Gamallo C
TI Mutations in the **beta-catenin** gene (CTNNB1) in endometrioid ovarian carcinomas.
SO CANCER RESEARCH, (1998 Apr 1) 58 (7) 1344-7.
Journal code: CNF. ISSN: 0008-5472.

L8 ANSWER 11 OF 11 MEDLINE DUPLICATE 7
AU Gunther K; Brabletz T; Kraus C; Dworak O; Reymond M A; Jung A; Hohenberger W; Kirchner T; Kockerling F; Ballhausen W G
TI Predictive value of nuclear **beta-catenin** expression for the occurrence of distant metastases in rectal cancer.
SO DISEASES OF THE COLON AND RECTUM, (1998 Oct) 41 (10) 1256-61.
Journal code: EAB. ISSN: 0012-3706.

=> d 4-8 10 ab 18

L8 ANSWER 4 OF 11 MEDLINE DUPLICATE 3
AB Alterations in multiple **phosphorylation** sites on exon 3 of the **beta-catenin** gene have recently been implicated in

hepatocarcinogenesis in humans as well as mice. To identify genetic alterations which could be involved in the chemical-induced hepatocarcinogenesis of rats, we analyzed the status of the sites in the **beta-catenin** gene (Ctnnb1) of liver neoplasms induced by diethylnitrosamine (DEN) in male F344 rats, using the polymerase chain reaction-single strand conformation polymorphism method. In the present investigation, we examined 35 hepatocellular neoplasms (28 adenomas and 7 carcinomas) for the expression of mutations in the region of the **beta-catenin** gene. Point mutation at codon 32, 35, **37** or 41, which has been reported in human and mouse liver cell carcinomas and/or other cancers, was recognized in eleven (31%) out of 35 lesions (8 adenomas and 3 carcinomas). Our results indicate that Ctnnb1 mutations may contribute to hepatocarcinogenesis in rats. Our finding that Ctnnb1 mutation was present in adenomas as well as carcinomas also suggests that the mutation is a relatively early event in DEN-induced hepatocarcinogenesis in rats.

L8 ANSWER 5 OF 11 BIOSIS COPYRIGHT 2000 BIOSIS

AB The immunohistochemical expression pattern of **beta-catenin** has been correlated with **beta-catenin** gene mutations, clinicopathological features, and disease outcome in 69 stage I and II ovarian carcinomas. **beta-Catenin** expression was localized in the nuclei, in addition to the cytoplasm and membrane, in 11 tumors (16%): nine endometrioid carcinomas with widespread nuclear expression and two serous carcinomas with focal nuclear expression. The remaining 58 carcinomas (84%) only had membranous **beta-catenin** expression. All but one of the endometrioid carcinomas with nuclear **beta-catenin** expression had considerable squamous metaplasia, and five of these cases had large areas of endometrioid tumor of low malignant potential. In addition, **beta-catenin** nuclear expression was observed in atypical epithelial cells in endometriotic glands adjacent to an endometrioid carcinoma. Sequencing was performed on 25 tumors and corresponding normal tissue: all 13 endometrioid tumors as well as 12 carcinomas of other histological types (four serous, two clear cell, two mucinous, and two mixed). There were oncogenic mutations in the **phosphorylation** sequence for GSK-3beta in exon 3 of the **beta-catenin** gene in seven endometrioid carcinomas with **beta-catenin** nuclear expression. Three mutations affected codon 32 (D32G, D32Y, and D32Y), one affected codon 33 (S33C), two affected codon **37** (S37C and S37F), and one affected codon 41 (T41A). No mutations were observed in the other 18 carcinomas analyzed, comprising two endometrioid and two serous carcinomas with **beta-catenin** nuclear expression, and 14 carcinomas of different histological types with only membranous expression. In the univariate and multivariate survival analyses, **beta-catenin** nuclear expression was selected as an indicator of good prognosis, because no patient whose tumor expressed **beta-catenin** in the nuclei showed relapses or died, in contrast to the 19 relapses and deaths among patients with tumors that only had **beta-catenin** membranous expression, including three of the four patients with endometrioid carcinomas. Oncogenic **beta-catenin** mutation is characteristic of a group of endometrioid carcinomas with a good prognosis, most of which originate from previous benign or borderline lesions. Endometrioid carcinomas with exclusively membranous expression of **beta-catenin** seem to represent a different subgroup of carcinomas that probably have a worse prognosis. In early-stage ovarian cancer, determination of the **beta-catenin** expression pattern could prove to be a useful marker for selecting low-risk patients.

L8 ANSWER 6 OF 11 MEDLINE DUPLICATE 4

AB **Beta-Catenin** has a critical role in E-cadherin-mediated cell-cell adhesion, and it also functions as a downstream signaling molecule in the wnt pathway. Mutations in the putative glycogen synthase kinase 3beta **phosphorylation** sites near the **beta-catenin** amino terminus have been found in some cancers and cancer cell lines. The mutations render **beta-catenin** resistant to regulation by a complex containing the glycogen synthase kinase 3beta, adenomatous polyposis coli, and axin proteins. As a result, **beta-catenin** accumulates in the cytosol and nucleus and activates T-cell factor/ lymphoid enhancing factor transcription factors. Previously, 6 of 27 melanoma cell lines were found to have **beta-catenin** exon 3 mutations affecting the N-terminal **phosphorylation** sites (Rubinfeld B, Robbins P, Elgamil M, Albert I, Porfiri E, Polakis P: Stabilization of **beta-catenin** by genetic defects in melanoma cell lines. Science 1997, 275:1790-1792). To assess the role of **beta-catenin** defects in primary melanomas, we undertook immunohistochemical and **DNA** sequencing studies in 65 melanoma specimens. Nuclear and/or cytoplasmic localization of **beta-catenin**, a potential indicator of wnt pathway activation, was seen focally within roughly one third of the tumors, though a clonal somatic mutation in **beta-catenin** was found in only one case (codon **45** Ser-->Pro). Our findings demonstrate that **beta-catenin** mutations are rare in primary melanoma, in contrast to the situation in melanoma cell lines. Nonetheless, activation of **beta-catenin**, as indicated by its nuclear and/or cytoplasmic localization, appears to be frequent in melanoma, and in some cases, it may reflect focal and transient activation of the wnt pathway within the tumor.

L8 ANSWER 7 OF 11 SCISEARCH COPYRIGHT 2000 ISI (R)

AB Heat shock factor 1 (HSF1) is the key transcriptional regulator of the heat shock genes that protect cells from environmental stress. However, because heat shock gene expression is deleterious to growth and development, we have examined mechanisms for HSF1 repression at growth temperatures, focusing on the role of **phosphorylation**. Mitogen-activated protein kinases (MAPKs) of the ERR family **phosphorylate** HSF1 and represses transcriptional function. The mechanism of repression involves initial **phosphorylation** by MAP kinase on serine 307, which primes HSF1 for secondary **phosphorylation** by glycogen synthase kinase 3 on a key residue in repression (serine 303). In vivo expression of glycogen synthase kinase 3 (alpha or beta) thus represses HSF1 through **phosphorylation** of serine 303. HSF1 is also **phosphorylated** by MAPK in vitro on a second residue (serine 363) adjacent to activation domain 1, and this residue is additionally **phosphorylated** by protein kinase C. In vivo, HSF1 is repressed through **phosphorylation** of this residue by protein kinase C alpha or -zeta but not MAPK. Regulation at **37** degrees C, therefore, involves the action of three protein kinase cascades that repress HSF1 through **phosphorylation** of serine residues 303, 307, and 363 and may promote growth by suppressing the heat shock response.

L8 ANSWER 8 OF 11 MEDLINE

AB **Beta-catenin** forms complexes with Tcf and Lef-1 and functions as a transcriptional activator downstream of the Wnt signaling pathway. Activation of the pathway by stabilization of **beta-catenin** has been shown to be important in the development of colorectal carcinoma, which is mainly caused by inactivating mutations of the adenomatous polyposis coli tumor suppressor gene or by activating mutations in exon 3 of the **beta-catenin** gene. Here, we analyzed mutations in exon 3 of the **beta-catenin** gene

in endometrial carcinoma cases in which loss of heterozygosity at the adenomatous polyposis coli tumor suppressor gene locus has been rarely reported. We found that 10 of 76 cases had **beta-catenin** gene mutations. All mutations identified were single-base missense mutations on serine/threonine residues (codons 33, **37**, 41, and **45**), altering the glycogen synthase kinase-3beta **phosphorylation** consensus motif, which participates in the degradation of **beta-catenin**. To determine whether these **beta-catenin** mutations actually led to stabilization of this protein, expression of **beta-catenin** was analyzed immunohistochemically, and 9 of 10 cases with the **beta-catenin** mutation and 20 of 66 cases without it showed accumulation of **beta-catenin** in the cytoplasm and/or nucleus. In total, 38% of cases showed accumulation of **beta-catenin**. These data indicate that stabilization of **beta-catenin** due to mutations in exon 3 of the **beta-catenin** gene and other mechanisms may have an important role in development of endometrial carcinomas.

L8 ANSWER 10 OF 11 MEDLINE DUPLICATE 6

AB Mutations of the **beta-catenin** gene (CTNNB1) have recently been implicated in the initiation of some colon carcinomas and melanomas. In these tumors, **beta-catenin** abnormally accumulates in the cell nuclei. In an ongoing immunohistochemical study of the cadherin-catenin complex protein expression in ovarian carcinomas, we observed **beta-catenin** in tumor cell nuclei in some cases; this prompted us to study whether or not this abnormal immunostaining pattern was due to mutation in the **beta-catenin** gene itself. This study examines **beta-catenin** immunohistochemical expression in 40 stage I and II ovarian borderline tumors and carcinomas of the most common histological types. Membrane expression was heterogeneous in all 40 cases. However, the cytoplasm and nucleus of five (one borderline tumor and four carcinomas) of the six endometrioid lesions contained **beta-catenin** expression. PCR and sequencing analyses of a 200-bp fragment of exon 3 of the CTNNB1 gene, encompassing the sequence for glycogen synthetase kinase-3beta **phosphorylation**, were performed in 11 tumors. Heterozygous substitution mutations at codon **37** in two cases (S37F and S37C) and at codon 41 in one case (T41A) were found in three endometrioid lesions (one borderline tumor and two carcinomas) with abnormal **beta-catenin** expression. Three endometrioid carcinomas and five tumors of other histological types analyzed showed normal **DNA** sequences. These results implicate **beta-catenin** gene mutations in ovarian malignant transformation with a characteristic phenotype: endometrioid ovarian carcinoma.

=> s l9 and stabiliz?

L10 17 L9 AND STABILIZ?

=> dup rem l10

PROCESSING COMPLETED FOR L10
L11 17 DUP REM L10 (0 DUPLICATES REMOVED)

=> d au ti so 1-17 l11

L11 ANSWER 1 OF 17 MEDLINE
AU Sadot E; Simcha I; Iwai K; Ciechanover A; Geiger B; Ben-Ze'ev A
TI Differential interaction of plakoglobin and **beta-catenin** with the ubiquitin-proteasome system.
SO ONCOGENE, (2000 Apr 13) 19 (16) 1992-2001.
Journal code: ONC. ISSN: 0950-9232.

L11 ANSWER 2 OF 17 CAPLUS COPYRIGHT 2000 ACS
AU Behrens, Jurgen
TI Cross-regulation of the Wnt signalling pathway: a role of MAP kinases
SO J. Cell Sci. (2000), 113(6), 911-919
CODEN: JNCSAI; ISSN: 0021-9533

L11 ANSWER 3 OF 17 MEDLINE
AU Farr G H 3rd; Ferkey D M; Yost C; Pierce S B; Weaver C; Kimelman D
TI Interaction among GSK-3, GBP, axin, and APC in Xenopus axis specification.
SO JOURNAL OF CELL BIOLOGY, (2000 Feb 21) 148 (4) 691-702.
Journal code: HMV. ISSN: 0021-9525.

L11 ANSWER 4 OF 17 MEDLINE
AU Wei Y; Fabre M; Branchereau S; Gauthier F; Perilongo G; Buendia M A
TI Activation of **beta-catenin** in epithelial and mesenchymal hepatoblastomas.
SO ONCOGENE, (2000 Jan 27) 19 (4) 498-504.
Journal code: ONC. ISSN: 0950-9232.

L11 ANSWER 5 OF 17 MEDLINE
AU Eberhart C G; Tihan T; Burger P C
TI Nuclear localization and mutation of **beta-catenin** in medulloblastomas.
SO JOURNAL OF NEUROPATHOLOGY AND EXPERIMENTAL NEUROLOGY, (2000 Apr) 59 (4) 333-7.
Journal code: JBR. ISSN: 0022-3069.

L11 ANSWER 6 OF 17 MEDLINE
AU Tejpar S; Nollet F; Li C; Wunder J S; Michils G; dal Cin P; Van Cutsem E; Bapat B; van Roy F; Cassiman J J; Alman B A
TI Predominance of **beta-catenin** mutations and **beta-catenin** dysregulation in sporadic aggressive fibromatosis (desmoid tumor).
SO ONCOGENE, (1999 Nov 11) 18 (47) 6615-20.
Journal code: ONC. ISSN: 0950-9232.

L11 ANSWER 7 OF 17 MEDLINE
AU Gallet A; Angelats C; Erkner A; Charroux B; Fasano L; Kerridge S

TI The C-terminal domain of armadillo binds to hypophosphorylated teashirt to modulate wingless signalling in Drosophila.
SO EMBO JOURNAL, (1999 Apr 15) 18 (8) 2208-17.
Journal code: EMB. ISSN: 0261-4189.

L11 ANSWER 8 OF 17 MEDLINE
AU Ogawa K; Yamada Y; Kishibe K; Ishizaki K; Tokusashi Y
TI **Beta-catenin** mutations are frequent in hepatocellular carcinomas but absent in adenomas induced by diethylnitrosamine in B6C3F1 mice.
SO CANCER RESEARCH, (1999 Apr 15) 59 (8) 1830-3.
Journal code: CNF. ISSN: 0008-5472.

L11 ANSWER 9 OF 17 MEDLINE
AU Garcia-Rostan G; Tallini G; Herrero A; D'Aquila T G; Carcangiu M L; Rimm D L
TI Frequent mutation and nuclear localization of **beta-catenin** in anaplastic thyroid carcinoma.
SO CANCER RESEARCH, (1999 Apr 15) 59 (8) 1811-5.
Journal code: CNF. ISSN: 0008-5472.

L11 ANSWER 10 OF 17 MEDLINE
AU Chen G; Huang L D; Jiang Y M; Manji H K
TI The mood-**stabilizing** agent valproate inhibits the activity of glycogen synthase kinase-3.
SO JOURNAL OF NEUROCHEMISTRY, (1999 Mar) 72 (3) 1327-30.
Journal code: JAV. ISSN: 0022-3042.

L11 ANSWER 11 OF 17 MEDLINE
AU Ishitani T; Ninomiya-Tsuji J; Nagai S; Nishita M; Meneghini M; Barker N; Waterman M; Bowerman B; Clevers H; Shibuya H; Matsumoto K
TI The TAK1-NLK-MAPK-related pathway antagonizes signalling between **beta-catenin** and transcription factor TCF.
SO NATURE, (1999 Jun 24) 399 (6738) 798-802.
Journal code: NSC. ISSN: 0028-0836.

L11 ANSWER 12 OF 17 MEDLINE
AU Chan E F; Gat U; McNiff J M; Fuchs E
TI A common human skin tumour is caused by activating mutations in **beta-catenin**.
SO NATURE GENETICS, (1999 Apr) 21 (4) 410-3.
Journal code: BRO. ISSN: 1061-4036.

L11 ANSWER 13 OF 17 MEDLINE
AU Caca K; Kolligs F T; Ji X; Hayes M; Qian J; Yahanda A; Rimm D L; Costa J; Fearon E R
TI Beta- and gamma-catenin mutations, but not E-cadherin inactivation, underlie T-cell factor/lymphoid enhancer factor transcriptional deregulation in gastric and pancreatic cancer.
SO CELL GROWTH AND DIFFERENTIATION, (1999 Jun) 10 (6) 369-76.
Journal code: AYH. ISSN: 1044-9523.

L11 ANSWER 14 OF 17 MEDLINE
AU Rimm D L; Caca K; Hu G; Harrison F B; Fearon E R
TI Frequent nuclear/cytoplasmic localization of **beta-catenin** without exon 3 mutations in malignant melanoma.
SO AMERICAN JOURNAL OF PATHOLOGY, (1999 Feb) 154 (2) 325-9.
Journal code: 3RS. ISSN: 0002-9440.

L11 ANSWER 15 OF 17 MEDLINE
AU Jho Eh; Lomvardas S; Costantini F
TI A GSK3beta **phosphorylation** site in axin modulates interaction with **beta-catenin** and Tcf-mediated gene expression.

SO BIOCHEMICAL AND BIOPHYSICAL RESEARCH COMMUNICATIONS, (1999 Dec 9) 266 (1) 28-35.
Journal code: 9[redacted] ISSN: 0006-291X.

L11 ANSWER 16 OF 17 MEDLINE
AU Fukuchi T; Sakamoto M; Tsuda H; Maruyama K; Nozawa S; Hirohashi S
TI **Beta-catenin** mutation in carcinoma of the uterine endometrium.
SO CANCER RESEARCH, (1998 Aug 15) 58 (16) 3526-8.
Journal code: CNF. ISSN: 0008-5472.

L11 ANSWER 17 OF 17 SCISEARCH COPYRIGHT 2000 ISI (R)
AU Diehl J A; Cheng M G; Roussel M F; Sherr C J (Reprint)
TI Glycogen synthase kinase 3 beta regulates cyclin D1 proteolysis and subcellular localization
SO GENES & DEVELOPMENT, (15 NOV 1998) Vol. 12, No. 22, pp. 3499-3511.
Publisher: COLD SPRING HARBOR LAB PRESS, 1 BUNGTOWN RD, PLAINVIEW, NY 11724.
ISSN: 0890-9369.

=> d 60-83 au ti so l9

L9 ANSWER 60 OF 83 MEDLINE DUPLICATE 16
AU Fuchs S Y; Fried V A; Ronai Z
TI Stress-activated kinases regulate protein stability.
SO ONCOGENE, (1998 Sep 17) 17 (11 Reviews) 1483-90. Ref: 87
Journal code: ONC. ISSN: 0950-9232.

L9 ANSWER 61 OF 83 MEDLINE
AU Gunther K; Brabletz T; Dworak O; Reymond M A; Kockerling F; Ballhausen W; Hohenberger W
TI [**Beta-catenin** expression and its significance for metastasis in curatively operated rectum carcinoma]. **Beta-Catenin** Expression und ihre Bedeutung fur die Metastasierung beim kurativ operierten Rektumkarzinom.
SO LANGENBECKS ARCHIV FUR CHIRURGIE. SUPPLEMENT. KONGRESSBAND, (1998) 115 1380-2.
Journal code: BAD. ISSN: 0942-2854.

L9 ANSWER 62 OF 83 MEDLINE
AU Ikeda S; Kishida S; Yamamoto H; Murai H; Koyama S; Kikuchi A
TI Axin, a negative regulator of the Wnt signaling pathway, forms a complex with GSK-3beta and **beta-catenin** and promotes GSK-3beta-dependent **phosphorylation** of **beta-catenin**.
SO EMBO JOURNAL, (1998 Mar 2) 17 (5) 1371-84.
Journal code: EMB. ISSN: 0261-4189.

L9 ANSWER 63 OF 83 MEDLINE DUPLICATE 17
AU Palacios J; Gamallo C
TI Mutations in the **beta-catenin** gene (CTNNB1) in endometrioid ovarian carcinomas.
SO CANCER RESEARCH, (1998 Apr 1) 58 (7) 1344-7.
Journal code: CNF. ISSN: 0008-5472.

L9 ANSWER 64 OF 83 MEDLINE DUPLICATE 18
AU Gunther K; Brabletz T; Kraus C; Dworak O; Reymond M A; Jung A; Hohenberger
W; Kirchner T; Kockerling F; Ballhausen W G
TI Predictive value of nuclear **beta-catenin** expression for the occurrence of distant metastases in rectal cancer.
SO DISEASES OF THE COLON AND RECTUM, (1998 Oct) 41 (10) 1256-61.
Journal code: EAB. ISSN: 0012-3706.

L9 ANSWER 65 OF 83 MEDLINE
AU Dashwood R H; Suzui M; Nakagama H; Sugimura T; Nagao M
TI High frequency of **beta-catenin** (ctnnb1) mutations in the colon tumors induced by two heterocyclic amines in the F344 rat.
SO CANCER RESEARCH, (1998 Mar 15) 58 (6) 1127-9.
Journal code: CNF. ISSN: 0008-5472.

L9 ANSWER 66 OF 83 MEDLINE DUPLICATE 19
AU Zurawel R H; Chiappa S A; Allen C; Raffel C
TI Sporadic medulloblastomas contain oncogenic **beta-catenin** mutations.
SO CANCER RESEARCH, (1998 Mar 1) 58 (5) 896-9.
Journal code: CNF. ISSN: 0008-5472.

L9 ANSWER 67 OF 83 MEDLINE DUPLICATE 20
AU Sanders D S; Bru[redacted] R; Darnton S J; Casson A G; H[redacted]son I; Williams H K; Jankowski J
TI Sequential changes in cadherin-catenin expression associated with the progression and heterogeneity of primary oesophageal squamous carcinoma [published erratum appears in Int J Cancer 1999 Jun 21;84(3):336].
SO INTERNATIONAL JOURNAL OF CANCER, (1998 Dec 18) 79 (6) 573-9.
Journal code: GQU. ISSN: 0020-7136.

L9 ANSWER 68 OF 83 MEDLINE
AU Balsamo J; Arregui C; Leung T; Lilien J
TI The nonreceptor protein tyrosine phosphatase PTP1B binds to the cytoplasmic domain of N-cadherin and regulates the cadherin-actin linkage.
SO JOURNAL OF CELL BIOLOGY, (1998 Oct 19) 143 (2) 523-32.
Journal code: HMV. ISSN: 0021-9525.

L9 ANSWER 69 OF 83 MEDLINE
AU Nabeshima K; Inoue T; Shimao Y; Kataoka H; Koono M
TI TPA-induced cohort migration of well-differentiated human rectal adenocarcinoma cells: cells move in a RGD-dependent manner on fibronectin produced by cells, and **phosphorylation** of E-cadherin/catenin complex is induced independently of cell-extracellular matrix interactions.
SO VIRCHOWS ARCHIV, (1998 Sep) 433 (3) 243-53.
Journal code: BZD. ISSN: 0945-6317.

L9 ANSWER 70 OF 83 CAPLUS COPYRIGHT 2000 ACS
IN Klein, Peter S.; Melton, Douglas
TI Inhibitors of glycogen synthase kinase-3 and methods for their identification and use
SO PCT Int. Appl., 64 pp.
CODEN: PIXXD2

L9 ANSWER 71 OF 83 MEDLINE
AU Orford K; Crockett C; Jensen J P; Weissman A M; Byers S W
TI Serine **phosphorylation**-regulated ubiquitination and degradation of **beta-catenin**.
SO JOURNAL OF BIOLOGICAL CHEMISTRY, (1997 Oct 3) 272 (40) 24735-8.
Journal code: HIV. ISSN: 0021-9258.

L9 ANSWER 72 OF 83 MEDLINE DUPLICATE 21
AU Kitaeva M N; Grogan L; Williams J P; Dimond E; Nakahara K; Hausner P; DeNobile J W; Soballe P W; Kirsch I R
TI Mutations in **beta-catenin** are uncommon in colorectal cancer occurring in occasional replication error-positive tumors.
SO CANCER RESEARCH, (1997 Oct 15) 57 (20) 4478-81.
Journal code: CNF. ISSN: 0008-5472.

L9 ANSWER 73 OF 83 MEDLINE
AU Ruff S J; Chen K; Cohen S
TI Peroxovanadate induces tyrosine **phosphorylation** of multiple signaling proteins in mouse liver and kidney.
SO JOURNAL OF BIOLOGICAL CHEMISTRY, (1997 Jan 10) 272 (2) 1263-7.
Journal code: HIV. ISSN: 0021-9258.

L9 ANSWER 74 OF 83 MEDLINE
AU Nabeshima K; Asada Y; Inoue T; Kataoka H; Shimao Y; Sumiyoshi A; Koono M
TI Modulation of E-cadherin expression in TPA-induced cell motility: well-differentiated human adenocarcinoma cells move as coherent sheets associated with **phosphorylation** of E-cadherin-catenin complex.
SO LABORATORY INVESTIGATION, (1997 Jan) 76 (1) 139-51.
Journal code: KZ4. ISSN: 0023-6837.

L9 ANSWER 75 OF 83 SCISEARCH COPYRIGHT 2000 ISI (R)
AU McCawley L J; OBrien P; Hudson L G (Reprint)
TI Overexpression of the epidermal growth factor receptor contributes to enhanced ligand-mediated motility in keratinocyte cell lines
SO ENDOCRINOLOGY, (JAN 1997) Vol. 138, No. 1, pp. 121-127.
Publisher: ENDOCRINE SOC, 4350 EAST WEST HIGHWAY SUITE 500, BETHESDA, MD 20814-4110.
ISSN: 0013-7227.

L9 ANSWER 76 OF 83 SCISEARCH COPYRIGHT 2000 ISI (R)
AU Tsukatani Y; Suzuki K; Takahashi K (Reprint)
TI Loss of density-dependent growth inhibition and dissociation of alpha-catenin from E-cadherin
SO JOURNAL OF CELLULAR PHYSIOLOGY, (OCT 1997) Vol. 173, No. 1, pp. 54-63.
Publisher: WILEY-LISS, DIV JOHN WILEY & SONS INC, 605 THIRD AVE, NEW YORK,
NY 10158-0012.
ISSN: 0021-9541.

L9 ANSWER 77 OF 83 SCISEARCH COPYRIGHT 2000 ISI (R)
AU Hofler H (Reprint); Keller G; Candidus S; Becker K F
TI New molecular aspects in gastric cancer: Possible clinical implications
SO ONKOLOGIE, (FEB 1997) Vol. 20, No. 1, pp. 18-24.
Publisher: KARGER, ALLSCHWILERSTRASSE 10, CH-4009 BASEL, SWITZERLAND.
ISSN: 0378-584X.

L9 ANSWER 78 OF 83 BIOSIS COPYRIGHT 2000 BIOSIS
AU Shimizu, Kazuya; Kawabe, Hiroshi; Minami, Seigo; Honda, Tomoyuki; Takaishi, Kenji; Shirataki, Hiromichi; Takai, Yoshimi (1)
TI SMAP, an Smg GDS-associating protein having arm repeats and **phosphorylated** by Src tyrosine kinase.
SO Journal of Biological Chemistry, (1996) Vol. 271, No. 43, pp. 27013-27017.
ISSN: 0021-9258.

L9 ANSWER 79 OF 83 MEDLINE
AU Orsulic S; Peifer M
TI An in vivo structure-function study of armadillo, the **beta-catenin** homologue, reveals both separate and overlapping regions of the protein required for cell adhesion and for wingless signaling.
SO JOURNAL OF CELL BIOLOGY, (1996 Sep) 134 (5) 1283-300.
Journal code: HMV. ISSN: 0021-9525.

L9 ANSWER 80 OF 83 SCISEARCH COPYRIGHT 2000 ISI (R)
AU FIALKA I; SCHWARZ H; REICHMANN E; OFT M; BUSSLINGER M; BEUG H (Reprint)
TI THE ESTROGEN-DEPENDENT C-JUNER PROTEIN CAUSES A REVERSIBLE LOSS OF MAMMARY
EPITHELIAL-CELL POLARITY INVOLVING A DESTABILIZATION OF ADHERENS JUNCTIONS
SO JOURNAL OF CELL BIOLOGY, (MAR 1996) Vol. 132, No. 6, pp. 1115-1132.
ISSN: 0021-9525.

L9 ANSWER 81 OF 83 SCISEARCH COPYRIGHT 2000 ISI (R)
AU MUTA H (Reprint); NOGUCHI M; KANAI Y; OCHIAI A; NAWATA H; HIROHASHI S
TI E-CADHERIN GENE-MUTATIONS IN SIGNET-RING CELL-CARCINOMA OF THE STOMACH
SO JAPANESE JOURNAL OF CANCER RESEARCH, (AUG 1996) Vol. 87, No. 8, pp. 843-848.
ISSN: 0910-5050.

L9 ANSWER 82 OF 83 MEDLINE
AU Reynolds A B; Daniel J M; Mo Y Y; Wu J; Zhang Z
TI The novel catenin p120cas binds classical cadherins and induces an unusual
morphological phenotype in NIH3T3 fibroblasts.
SO EXPERIMENTAL CELL RESEARCH, (1996 Jun 15) 225 (2) 328-37.

Journal code: EPB. ISSN: 0014-4827.

L9 ANSWER 83 OF 83 [redacted]CISEARCH COPYRIGHT 2000 ISI ([redacted]
AU KAWANISHI J; KATO J; SASAKI K; FUJII S; WATANABE N; NIITSU Y (Reprint)
TI LOSS OF E-CADHERIN-DEPENDENT CELL-CELL ADHESION DUE TO MUTATION OF THE **BETA-CATENIN** GENE IN A HUMAN CANCER CELL-LINE, HSC-39
SO MOLECULAR AND CELLULAR BIOLOGY, (MAR 1995) Vol. 15, No. 3, pp. 1175-1181.
ISSN: 0270-7306.